



Serial No.: 10/532,461  
(US National Stage of PCT/IB2003/004701)  
Applicants: LOUW, Izak de Villiers, *et. al*  
Atty. Ref.: 10025.0160.PCUS00

### III. REMARKS

#### AMENDMENTS TO THE CLAIMS:

Applicants submit that the amendments to claim 1 are needed for proper protection of Applicants' claimed invention and will not require a substantial amount of additional work on the part of the Office.

The examiner rightly recognized, in Examiner's Amendment dated October 24, 2006, that claim 1 erroneously contained two duplicative occurrences of the following limitation: "elastomeric materials having constituents which are not confined to carbon and hydrogen and which include, in addition to carbon and hydrogen, other atomic species as constituents." And accordingly, the examiner deleted the second occurrence of this limitation by way of the Examiner's Amendment referenced above.

Upon review, Applicants have discovered that the second occurrence of this limitation is correct, and instead, the first occurrence of this limitation was in error. Accordingly, Applicants have amended claim 1 to read as follows:

1. (Currently Amended): A process for the activation by oxyfluorination of at least part of a surface of a solid, which process includes exposing, under selected conditions of temperature and pressure and for a selected reaction time, at least part of the surface of the material of the solid to an oxyfluorinating atmosphere which is a gas/vapour mixture which includes at least one fluorine-containing gas which reacts with the material of the exposed surface, at least one oxygen-containing gas which reacts with the material of the exposed surface, and water vapour, said gases in the oxyfluorinating atmosphere acting to oxyfluorinate the exposed surface, thereby to activate the exposed surface to enhance the amenability of the exposed surface to adhesive bonding to other materials, the process including the steps whereby, in combination, the solid material which is subjected to activation by oxyfluorination is selected from the group whose members consist of carbon, polymeric materials having constituents which are confined to carbon and hydrogen, elastomeric materials having constituents which are confined to carbon and hydrogen, polymeric materials having constituents which are not confined to carbon and hydrogen and which include, in addition to carbon and hydrogen, other atomic species as constituents, elastomeric materials having constituents which are not confined to carbon and hydrogen and which include, in addition to carbon and hydrogen, other atomic species as constituents, and mixtures of any two or more of said members; the exposing of the solid surface to the oxyfluorinating atmosphere is carried [[our]]out on a continuous basis by continuously transporting the solid through an open-ended reaction chamber; and the water vapour acts further to enhance the amenability of the exposed surface, provided by the oxyfluorination achieved by said gases, to adhesive bonding to said other materials.

Applicants respectfully submit that no additional search or substantial amount of additional work is needed by the above amendments to claim 1, and further, that claim 1 is patentable over the art of record. The Examiner's reasons for allowance stated as follows:



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The claimed invention including oxyfluorinating solid material activation from groups consisting of carbon, carbon and hydrogen confined polymeric materials, carbon and hydrogen non-confined elastomeric materials, and mixtures of any two thereof in an open ended reaction chamber exposure with water vapor acting to enhance amenability of the exposed surface, provided by the oxyfluorination achieved by gases, to adhesive bonding to other materials is not found in the prior art either singly or in combination. The closest prior art are Mori et al. (US 6,620,282) which discloses solid bonding with out an agent but not the independently claimed carbon and Vargo et al (US 6,790,526) which discloses oxytbalopolymer adhesive composite with covalently bonded carbon polymer but not the necessary motivation or combination suggestion to obviate the claimed invention.

By the above amendment, Applicant's claimed invention includes a carbon and hydrogen confined elastomeric material and a carbon and hydrogen non-confined polymeric material. However, Applicants do not believe that the examination of the above amendments will require a substantial amount of additional work in light of the Examiner's previous reasons for allowance articulated above and believe that the claims remain in condition for allowance. MPEP § 714.16.

Applicants have further amended an obvious typographical error in claim 1 having replaced "our" with "out."

SUPPLEMENTARY INFORMATION DISCLOSURE STATEMENT:

In addition to the above claim amendments, Applicants have just recently been made aware of document, CN1336281. Accordingly, in compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the document listed on attached Form PTO-1449 be considered by the Examiner and made of record. An original copy of CN1336281 (B1) and a copy of the translation of CN1336281 are enclosed for the examiner's consideration.

The present Information Disclosure Statement is being filed prior to payment of the issue fee. Further, the reference CN1336281 (B1) was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement. Applicants authorize the Commissioner to deduct the fee set forth in §1.17(p) from Deposit Account No. 08-3038/10025.0160.PCUS00 for payment of the



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fee set forth in §1.17(p) for filing this information disclosure statement, accordingly, Applicants believe that this information disclosure statement is timely filed in accordance with 37 C.F.R. § 1.97(d).

In accordance with 37 C.F.R. §§ 1.97(g),(h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

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The undersigned representative requests any extension of time that may be deemed necessary to further the prosecution of this application. The undersigned representative authorizes the Commissioner to charge any additional fees under 37 C.F.R. § 1.16 or 1.17 that may be required, or credit any overpayment, to Deposit Account No. 08-3038/10025.0160.PCUS00.

The Examiner is invited to directly contact the undersigned representative by telephone to discuss any issues or questions presented by this paper.

Respectfully submitted,

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